

# Red Hat OpenShift Kubernetes Engine

A security-focused foundation for enterprise Kubernetes

## Key benefits:

- Consistent hybrid cloud foundation with Red Hat Enterprise Linux CoreOS immutable architecture
- Active, cross-provider independent software vendor (ISV) ecosystem
- Simple installation and upgrades, even in air-gapped environments
- Core cluster services, including monitoring, registry, virtualization, Helm package management, and more

## Product overview

Red Hat® OpenShift® Kubernetes Engine (formerly Red Hat OpenShift Container Engine) delivers the foundational, security-focused capabilities of enterprise Kubernetes on Red Hat Enterprise Linux® CoreOS to run containers in hybrid cloud environments. Based on innovative upstream open source projects, this edition of Red Hat OpenShift provides core cluster services that include monitoring, registry, networking, routing, virtualization, Helm package management, and more to help organizations deploy, run, and manage containers.

## Features and benefits

Red Hat OpenShift Kubernetes Engine consists of several fully integrated core components for building, deploying, and managing containerized applications.

- **Stable, security-focused foundation:** Red Hat Enterprise Linux CoreOS, a lightweight variant of the [leading enterprise, security-focused Linux platform](#), provides a consistent application foundation across enterprise hybrid clouds. With Red Hat Enterprise Linux CoreOS, teams can take advantage of over-the-air updates from the Red Hat Enterprise Linux kernel to operate and use a security-focused, easily managed container host.
- **Built with certified Kubernetes:** Red Hat OpenShift is a Certified Distribution by the Cloud Native Computing Foundation (CNCF), providing proof that our solution is consistent with other Kubernetes installations and provides access to the latest features.
- **Automated installation on hybrid infrastructure:** The OpenShift operator model supports automated installation, upgrades, and life-cycle management for every part of your container application environment with no downtime. With a single step, teams receive stability, security patches, and bug fixes to maintain the performance of their container deployments.

## Red Hat OpenShift portfolio: A choice of container solutions

Red Hat OpenShift is the leading enterprise Kubernetes platform, trusted by organizations across industries and the globe for application innovation.

- **Red Hat OpenShift Kubernetes Engine** (formerly Red Hat OpenShift Container Engine) delivers the foundational, security-focused capabilities of enterprise Kubernetes on Red Hat Enterprise Linux CoreOS to run containers in hybrid cloud environments.
- **Red Hat OpenShift Container Platform** adds a full set of operations and developer services and tools, including Serverless, Service Mesh, and Pipelines. With OpenShift Container Platform, organizations can adopt a hybrid cloud strategy and start building cloud-native applications. The proven platform includes a complete set of services that empower developers to code with speed and agility for applications while providing more flexibility and efficiency for IT operations teams.



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# Red Hat OpenShift Kubernetes Engine

- **Red Hat OpenShift Platform Plus** builds on the capabilities of OpenShift Container Platform with advanced multicluster security features, day-2 management capabilities, integrated data management, and a global container registry. With OpenShift Platform Plus, organizations can more consistently protect and manage applications across open hybrid cloud environments and application life cycles.

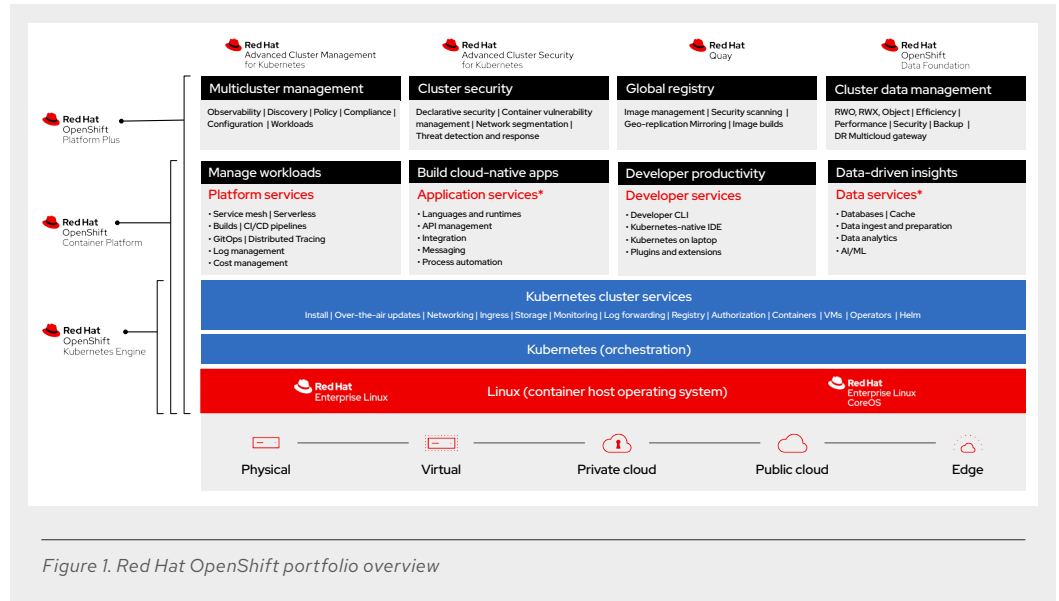


Figure 1. Red Hat OpenShift portfolio overview

**Table 1. Red Hat OpenShift Kubernetes Engine features**

Feature	Description
Enterprise security tools	Provides default security context constraints, pod security policies, ideal network and storage settings, service account configuration, Security-Enhanced Linux (SELinux) integration, HAProxy edge routing configuration, and other standard protections.
<a href="#">Red Hat OpenShift Virtualization</a>	Brings virtual machines (VMs) to OpenShift to modernize existing applications or run them alongside containers in a Kubernetes-native, serverless architecture.
Edge computing structures	Extends Kubernetes capabilities to edge locations with consistent operations at scale through flexible structure options, including 3-node clusters and remote worker nodes, to simplify remote application deployment.
Kubectl command-line tool and OpenShift command-line interface (CLI)	Supports creating applications and managing OpenShift Container Platform projects from a terminal to work directly with project source code.

Feature	Description
Networking	Offers full, supported access to the Kubernetes Container Network Interface (CNI), including support for any third-party software-defined networking solution that is compatible with Red Hat OpenShift Container Platform.
Operator Lifecycle Manager (OLM)	Controls access to cluster content and operator-controlled life-cycle services.
Operators	Simplifies management of complex services and supports over-the-air updates for Red Hat OpenShift components.
Helm Charts	Streamlines application deployment with time-saving templates.

**Discover more about Red Hat OpenShift Kubernetes Engine**



**About Red Hat**

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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